

The National Academies Press Fall 2024 Rights Guide

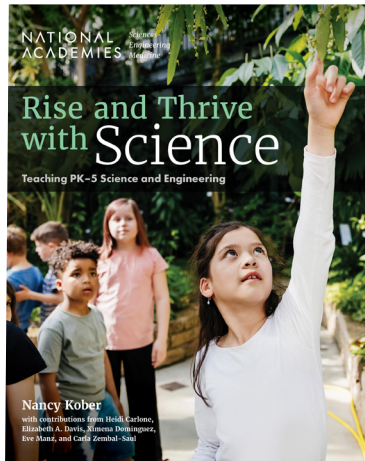




The National Academies Press (NAP) publishes the publications of the National Academies of Sciences, Engineering, and Medicine. NAP publishes more than 200 publications per year on a wide range of topics in science, engineering, and medicine, providing authoritative, independently researched information on important matters in science and health policy.

Translation rights inquiries can be directed to:

Barbara Murphy
Manager, Sales and Marketing
bmurphy@nas.edu



January 2024

8.25 x 10, 222 pages

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\$39.95

Ebook Available: \$31.99

Rise and Thrive with Science Teaching PK-5 Science and Engineering

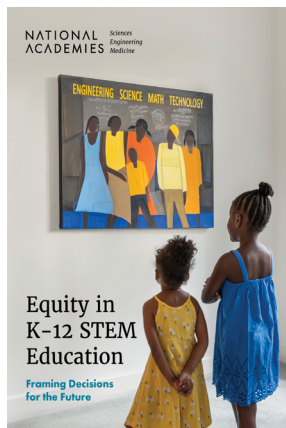
Research shows that children learn science and engineering subjects best by engaging from an early age in the kinds of practices used by real scientists and engineers. By doing science and engineering, children not only develop and refine their understanding of the core ideas and crosscutting concepts of these disciplines, but can also be empowered to use their growing understanding to make sense of questions and problems relevant to them. This approach can make learning more meaningful, equitable, and lasting.

Using cases and shorter examples, *Rise and Thrive with Science* shows what high-quality teaching and learning in science and engineering can look like for preschool and elementary school children. Through analyses of these examples and summaries of research findings, the guide points out the key elements of a coherent, research-grounded approach to teaching and learning in science and engineering. This guide also discusses the kinds of support that educators need to implement effective and equitable instruction for all children. This book will provide inspiration for practitioners at the preschool and elementary levels to try new strategies for science and engineering education, whatever their level of experience.

Rise and Thrive with Science will be an essential guide for teachers as they organize instruction to enable young children to carry out their own science investigations and engineering design projects, determine the kinds of instruction that lead to meaningful learning, and try to engage every one of their students.

Nancy Kober | Heidi Carlone, Elizabeth A. Davis, Ximena Dominguez, Eve Manz, Carla Zembal-Saul, Amy Stephens and Heidi Schweingruber, Editors | National Academies of Sciences, Engineering, and Medicine

Equity in K-12 STEM Education Framing Decisions for the Future



December 2024
6 x 9, 370 pages
Paperback: 978-0-309-69950-1
\$45.00
Ebook Available: \$34.99

Science, technology, engineering, and mathematics (STEM) live in the American imagination as promising tools for solving pressing global challenges and enhancing quality of life. Despite the importance of the STEM disciplines in the landscape of U.S. political, economic, and social priorities, STEM learning opportunities are unevenly distributed, and the experiences an individual has in STEM education are likely to vary tremendously based on their race, ethnicity, socio-economic class, gender, and a myriad of other factors.

Equity in K-12 STEM Education: Framing Decisions for the Future approaches equity in STEM education not as a singular goal but as an ongoing process that requires intentional decision-making and action toward addressing and disrupting existing inequities and envisioning a more just future. Stakeholders at all levels of the education system - including state, district, and school leaders and classroom teachers - have roles as decision-makers who can advance equity. This consensus study provides five equity frames as a guide to help decision-makers articulate short- and long-term goals for equity and make decisions about policy and practice.

Committee on Equity in PreK-12 STEM Education | Eileen R. Parsons, Kenne A. Dibner, and Heidi Schweingruber, Editors | National Academies of Sciences, Engineering, and Medicine

“One specific takeaway from the report is imperative: Everyone has a role in making STEM education more equitable,” said Eileen Carlton Parsons, professor emerita at the University of North Carolina at Chapel Hill and chair of the committee that wrote the report. “Anyone interested or anyone invested in creating a more equitable education system in their community can find propositions to explore in our recommendations.”



April 2024
6 x 9, 274 pages
Paperback: 978-0-309-71316-0
\$40.00
Ebook Available: \$32.99

Social Media and Adolescent Health

Smartphones, access to the internet, and the growing prevalence of social media have transformed how people consume information and interact with the world and each other. Adolescents have grown up with these technologies and are ubiquitous users—95 percent of teenagers in the United States have a smartphone, and almost all of them access the internet every day. As these technologies have become more integrated into our everyday lives, mental health among young people has declined. Social media use is often cited as a reason for this concerning trend.

Social Media and Adolescent Health explores the broad effects of social media on physical and mental health and well-being, focusing on the relative risks and benefits of various forms of online media and the consequences of media use during childhood and adolescence. This book bases consideration of aspects of social media around affordances - referring to what a user can do with a thing, in this case with a website, app, or videogame, in order to compare the relationship between technology and behavior. The book takes an in-depth look at how social media work, focusing on the common advertising and consumer retention strategies as well as the platform affordances that affect users' experience with particular emphasis on how these affordances interact with adolescence.

In addition, *Social Media and Adolescent Health* discusses how social media affect well-being and reviews recent evidence on the benefits and harms associated with digital media use. This book also considers how changes to the design of social media might improve transparency and public confidence in the platforms; sets out training and educational strategies to improve digital literacy among young people; and presents an analysis of the specific problem of digital harassment and abuse. *Social Media and Adolescent Health* will ground the public conversation around this issue and serve as a platform for better science and targeted action that protects youth's mental health.

Sandro Galea, Gillian J. Buckley, and Alexis Wojtowicz, Editors | Committee on the Impact of Social Media on Adolescent Health | National Academies of Sciences, Engineering, and Medicine

Reference Manual on Scientific Evidence, 4th Edition

Reference Manual on
Scientific Evidence, 4th
Edition

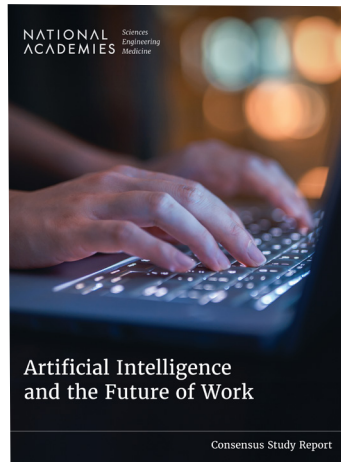
December 2024
6 x9, 2,000 pages
Two-Volume Paperback Set
978-0-309-70123-5
\$125.00
Ebook Available: \$99.99

Reference Manual on Scientific Evidence is a primary reference source for federal judges on questions of science in litigation. This resource assists judges in managing cases involving complex scientific and technical evidence by describing the basic tenets of key scientific fields from which legal evidence is typically derived and by providing examples of cases in which that evidence has been used. It offers judges advice on how to manage expert testimony, discusses emerging problems with expert testimony, and provides information on the methodology of areas of science that often present difficult issues when introduced in the form of expert testimony.

First published in 1994 by the Federal Judicial Center, *Reference Manual on Scientific Evidence* has been relied upon in the legal and academic communities and is often cited by various courts and others. Judges faced with disputes over the admissibility of scientific and technical evidence refer to the manual to help them better understand and evaluate the relevance, reliability and usefulness of the evidence being proffered. The manual is not intended to tell judges what is good science and what is not. Instead, it serves to help judges identify issues on which experts are likely to differ and to guide the inquiry of the court in seeking an informed resolution of the conflict.

The 4th edition updates the topics covered in the 2011 3rd Edition with the latest science and expands to discuss many new topics, identifying issues that will be useful to judges and others in the legal profession. This valuable reference examines pivotal issues in the areas of science most often subject to dispute, discussing assessment of a case's needs and evaluating experts and data. *Reference Manual on Scientific Evidence* will support judges and other legal professions to ensure that science presented in the courtroom can be understood in the lens of the scientific method and reasoning.

National Academies of Sciences, Engineering, and Medicine



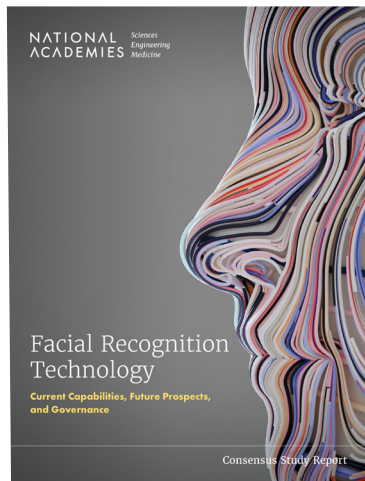
October 2024
8.5 x 11, 190 pages
Paperback: 978-0-309-71714-4
\$35.00
Ebook Available: \$24.99

Artificial Intelligence and the Future of Work

Interest in how advances in artificial intelligence – AI – will affect workers has been growing in recent years, especially with the recent rapid increase in capabilities and adoption of large language model-based chatbots such as ChatGPT and other generative AI tools. Today, the speed of technological progress of AI is not just reshaping tools, but also the fabric of the workforce and societal structures. The effects of AI have expanded at an unprecedented rate, permeating various facets of daily life and significantly altering the workforce terrain. Policymakers, executives, and industry leaders are rightfully eager to understand these advances, as the implications are multifaceted, impacting productivity, the workforce, education, and society at large.

Artificial Intelligence and the Future of Work describes the current state and capabilities of AI as they relate to the workforce and offers insights that prepare us for the challenges ahead and opportunities that will arise. The trajectories that AI-enabled futures might take can lead to outcomes of profound benefit or significant disruption. *Artificial Intelligence and the Future of Work* identifies key open questions and describes research opportunities and needs.

Committee on Automation and the U.S. Workforce: An Update | National Academies of Sciences, Engineering, and Medicine



April 2024
8.5 x 11, 120 pages
Paperback: 978-0-309-71320-7
\$24.00
Ebook Available: \$19.99

Facial Recognition Technology

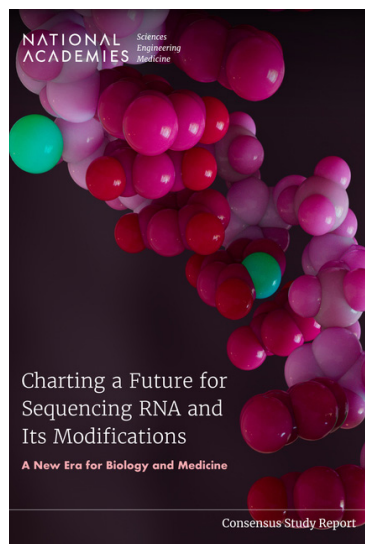
Current Capabilities, Future Prospects, and Governance

Facial recognition technology is increasingly used for identity verification and identification, from aiding law enforcement investigations to identifying potential security threats at large venues. However, advances in this technology have outpaced laws and regulations, raising significant concerns related to equity, privacy, and civil liberties.

This book explores the current capabilities, future possibilities, and necessary governance for facial recognition technology. *Facial Recognition Technology* discusses legal, societal, and ethical implications of the technology, and recommends ways that federal agencies and others developing and deploying the technology can mitigate potential harms and enact more comprehensive safeguards.

Committee on Facial Recognition: Current Capabilities, Future Prospects, and Governance | National Academies of Sciences, Engineering, and Medicine

“Facial recognition technology generates novel and complex legal challenges and raises a variety of distinct, unsettled legal questions. It also raises complicated social questions about privacy and public and private surveillance, given the highly personal implications of the technology. It is crucial that governments make tackling these issues a priority. Failing or choosing not to adopt policies and regulations on the development and use of facial recognition technology would effectively cede decision-making and rulemaking on these important questions of great public concern entirely to the private sector and the marketplace.” - Jennifer Mnookin, co-chair of the authoring committee



July 2024

7 x10, 260 pages

Paperback: 978-0-309-70695-7

\$40.00

Ebook Available: \$29.99

Charting a Future for Sequencing RNA and its Modifications

A New Era for Biology and Medicine

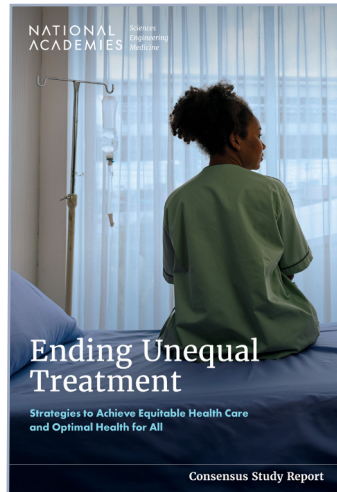
Ribonucleic acid (RNA) modifications play essential roles in the cell, and their dysfunction has implications in health and disease. Despite their importance, and even with a growing field of research and technology to understand RNA modifications, much remains unknown. An investment in epitranscriptomics – the direct sequencing of RNA modifications – can fundamentally impact the trajectory of cancer research, vaccine development, and personalized medicine.

Charting a Future for Sequencing RNA and its Modifications presents a roadmap to guide the development of tools, technologies, and infrastructure that are needed to realize the capability of sequencing any RNA, including all of its modifications, in a robust and accessible way. This book defines the science and technology roadmap; identifies scientific, technical, computational, policy, infrastructure, and workforce needs; and makes actional recommendations toward achievement of direct sequencing of RNA modifications.

Charting a Future for Sequencing RNA and its Modifications provides guidelines and sets goals that will foster the technology and infrastructure needed to enable, for any cell type of any organism, the complete end-to-end sequencing of its epitranscriptome – the chemical modifications that occur throughout all RNAs in a cell or sample of interest.

Toward Sequencing and Mapping of RNA Modifications Committee | National Academies of Sciences, Engineering, and Medicine

“The past several decades have included a remarkable trend toward precision medicine, driven by groundbreaking efforts such as the sequencing and mapping of the human genome, but we now know that our genetic code alone doesn’t tell the whole story. Understanding RNA modifications and harnessing this knowledge holds immense potential — not only for human health and medicine but also for shaping all living systems and the products and technologies stemming from them.” - Victor J. Dzau, president of the National Academy of Medicine



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6 x 9, 374 pages

Paperback: 978-0-309-72155-4

\$50.00

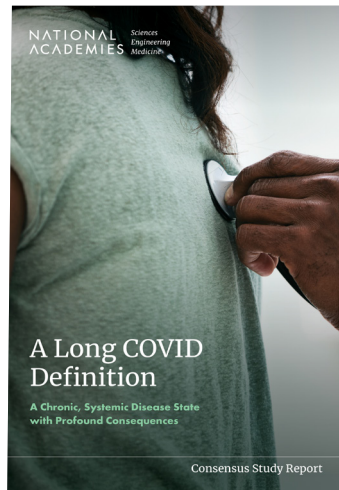
Ebook Available: \$64.99

Ending Unequal Treatment: Strategies to Achieve Equitable Health Care and Optimal Health for All

In 2003, the Institute of Medicine issued the landmark report, *Unequal Treatment: Confronting Racial Bias and Ethnic Disparities in Health Care*, which assessed the extent of racial and ethnic differences in health care not otherwise attributable to known factors such as access and lack of insurance. Among the key findings of *Unequal Treatment* was that one of the main factors contributing to health care inequities was stereotyping and prejudice by clinicians, which even when unconscious, consistently caused clinicians to misdiagnose and undertreat minoritized individuals. *Unequal Treatment* made a series of recommendations for eliminating health and health care disparities. Unfortunately, research shows that many disparities have persisted, and, in some cases, widened over time. Little progress has occurred toward implementing the recommendations in the 2003 report even as researchers have more thoroughly documented that such health inequities still exist and developed some interventions to address health and health care inequities.

At the request of the National Institutes of Health, this new study revisits the findings and recommendations of the 2003 report and reviews the current status of racial and ethnic health care inequities in the United States. *Ending Unequal Treatment* highlights the major drivers of health care inequities, provides insight into successful and unsuccessful interventions, identifies gaps in the evidence base, proposes strategies to close those gaps, considers ways to scale and spread effective interventions to reduce racial and ethnic inequities in healthcare, and makes recommendations to advance health equity.

Committee on Unequal Treatment Revisited: The Current State of Racial and Ethnic Disparities in Health Care
National Academies of Sciences, Engineering, and Medicine



July 2024

6 x 9, 200 pages

Paperback: 978-0-309-71908-7

\$40.00

Ebook Available: \$29.99

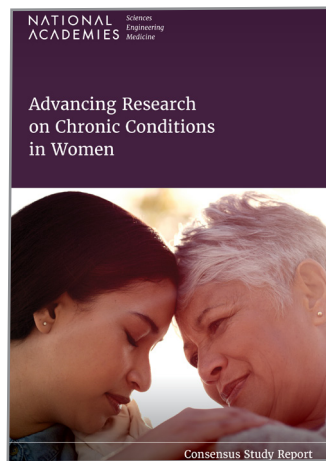
A Long COVID Definition A Chronic, Systemic Disease State with Profound Consequences

Since the onset of the COVID-19 pandemic, millions of individuals across the globe have experienced ongoing symptoms following infection with severe acute respiratory syndrome coronavirus. The long-term health effects of COVID-19, known as Long COVID, are profound. Long COVID currently impacts tens of millions of people in the United States alone. This complex and lingering medical condition has exposed shortcomings in public health messaging and education, clinical care, research, and access to social support services. It has also illustrated the need to better understand infection-associated chronic conditions more broadly, both to improve care for those who currently live with infection-associated chronic conditions and to prepare for and respond to future pandemics. Research and available information on Long COVID have varied, in part because of the heterogeneous definitions used in research and clinical practice. A uniform, core definition could help patients, clinicians, researchers, and policy makers understand and navigate Long COVID more effectively.

A Long COVID Definition identifies the best available evidence and information to refine the definition for Long COVID. This book offers a framework for applying the definition in specific use cases, including for clinical care, research, and public health. The definition of Long COVID provided in this book will enable more consistent study of the prevalence and natural history of Long COVID; improve understanding and enhance access to effective care and treatment; aid clinicians in consistent diagnosis, documentation, and treatment; and harmonize research and surveillance efforts, while providing researchers flexibility in the design of studies.

Committee on Examining the Working Definition for Long COVID | Harvey Fineberg, Lisa Brown, Tequamu Worku, and Ilana Goldowitz, Editors | National Academies of Sciences, Engineering, and Medicine

“Long COVID is a devastatingly persistent result of the COVID-19 pandemic that the medical community has yet to fully address,” said Victor J. Dzau, president of the National Academy of Medicine. “Serving this patient population through better-coordinated care, more definitive diagnoses, and more efficient and streamlined research are important next steps for addressing its impact.”



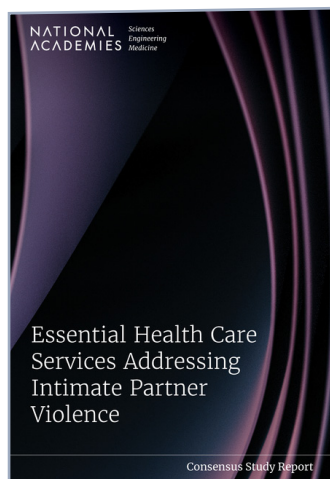
October 2024
6 x 9, 490 pages
Paperback: 978-0-309-71864-6
\$72.00
Ebook Available: \$69.99

Advancing Research on Chronic Conditions in Women

The health of women serves as a foundation for societal welfare and advancement. Although women generally outlive men, they spend approximately nine more years in a state of suboptimal physical, social, and psychological well-being. In comparison to men, women experience a 1.3-to-2-fold increase in the prevalence of arthritis, depression, Alzheimer's disease, and asthma and up to 11-fold increase for other conditions such as osteoporosis. Ongoing research aims to identify strategies for diagnosing, treating, preventing, and managing chronic conditions in women. However, the basic etiology of several chronic conditions remains unknown, and gaps remain in research on structural and social determinants of health and their effect on chronic conditions in women.

Advancing Research on Chronic Conditions in Women reviews the literature on chronic debilitating conditions in women, focusing on epidemiology, contributing factors, prevention, diagnosis, treatment, as well as the social and economic impact that chronic conditions have on women. This book explores the ways that women develop chronic conditions differently from men, female-specific conditions, chronic conditions that primarily impact women, and the effects of multiple occurrence of chronic conditions in women. The book then describes the existing barriers to enhancing the translation of research findings and explores the potential application of other research areas to the study of chronic conditions in women.

Committee on Framework for the Consideration of Chronic Debilitating Conditions in Women
National Academies of Sciences, Engineering, and Medicine



May 2024

6 x 9, 316 pages

Paperback: 978-0-309-71389-4

\$40.00

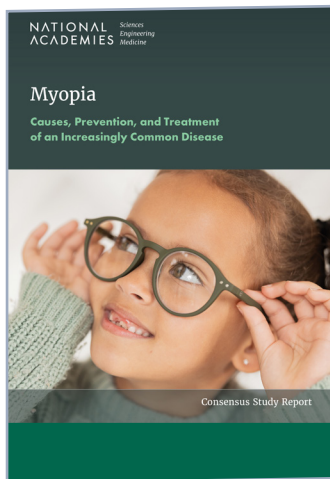
Ebook Available: \$34.99

Essential Health Care Services Addressing Intimate Partner Violence

Nearly half of all U.S. women experience some form of intimate partner violence in their lifetime, which can include physical or sexual violence, stalking, psychological aggression, and reproductive coercion by a current or former intimate partner. Women with a history of intimate partner violence have 4.5 times more emergency department visits than those without. Some of the most serious injuries associated with intimate partner violence include traumatic brain injury, strangulation injuries, and injuries to the head, face, and neck. The effects on gynecological and reproductive health can also be severe. Studies after Hurricane Katrina, the Deepwater Horizon oil spill, and the COVID-19 pandemic have found increases in the prevalence and severity of intimate partner violence following these public health emergencies. The availability of health care services needed by women experiencing intimate partner violence is also often more limited during public health emergencies.

This book explores essential health care services for women related to intimate partner violence (IPV) during steady state conditions, determining whether the essential health care services related to IPV differ during public health emergencies (PHEs), and identifying strategies to sustain access to those essential health care services during PHEs. *Essential Health Care Services Addressing Intimate Partner Violence* presents findings from research and deliberations and lays out recommendations for leaders of health care systems, federal agencies, health care providers, emergency planners, and those involved in IPV research.

Committee on Sustaining Essential Health Care Services Related to Intimate Partner Violence During Public Health Emergencies | Susan J. Curry, and Crystal J. Bell, Editors | National Academies of Sciences, Engineering, and Medicine



October 2024

6 x 9, 350 pages

Paperback: 978-0-309-71785-4

\$55.00

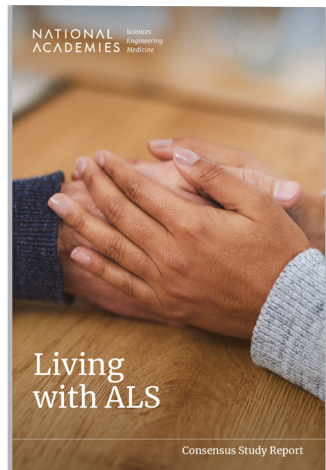
Ebook Available: \$34.99

Myopia: Causes, Prevention, and Treatment of an Increasingly Common Disease

Myopia, or nearsightedness, is a common type of refractive error where close objects appear clearly, but objects farther away appear blurred. Although this vision condition is relatively common, recent data has shown a considerable global increase in myopia. This study assesses the current mechanistic understanding of myopia pathogenesis and causes of its increased prevalence, identifies knowledge gaps and barriers to progress, and develops a research agenda aimed at better understanding the biological and environmental factors that could explain its increasing incidence.

Myopia: Causes, Prevention, and Treatment of an Increasingly Common Disease explores the basic anatomical and physiological development of myopia; the environmental factors that might increase risk, such as near work or offer protective effects, such as time outdoors; the inconsistent evidence around the effect of electronic devices; treatment options; screening tools and procedures; types of screening options/opportunities; diagnosis; treatment; public policy; and professional practice approaches to address promote equitable and continued access to ocular health care for diagnosis and treatment.

Committee on Focus on Myopia: Pathogenesis and Rising Incidence | National Academies of Sciences, Engineering, and Medicine



October 2024
6 x 9, 250 pages
Paperback: 978-0-309-71801-1
\$40.00
Ebook Available: \$39.99

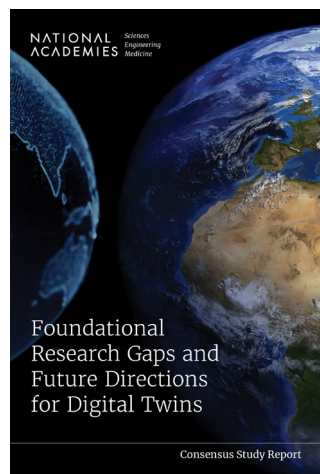
Living with ALS

Amyotrophic lateral sclerosis (ALS) is a rapidly progressive, invariably fatal neurological disease for which there are no treatments that stop or reverse disease progression. At least 31,000 individuals in the United States have a diagnosis of ALS at any given time. No two people living with ALS will experience the disease in the same way or have their disease progress at the same rate. Some people living with ALS have symptoms that progress slowly, while others progress rapidly.

Living with ALS identifies and recommends actions for the public, private, and nonprofit sectors to undertake that would make ALS a livable disease within a decade. The recommendations of this study promote a multidisciplinary care system for ALS patients, support for caregivers, and additional research on the genetic and external risk factors for this disease.

Committee on Amyotrophic Lateral Sclerosis: Accelerating Treatments and Improving Quality of Life | Alan I. Leshner, Rebecca A. English, Lyle Carrera, and Joe Alper, Rapporteurs | National Academies of Sciences, Engineering, and Medicine

“Receiving a diagnosis of ALS is devastating for the individual, their family, and their caregivers,” said Alan Leshner, chief executive officer emeritus, American Association for the Advancement of Science, and chair of the committee that wrote the report. “Dealing with this illness requires a complex array of medical and support service interventions, and the intensity of care required increases exponentially over time. Implementing the vision laid out in our report would go a long way toward achieving the goal set in the committee’s charge of making ALS a livable disease within a decade.”



April 2024

6 x 9, 202 pages

Paperback: 978-0-309-70042-9

\$35.00

Ebook Available: \$29.99

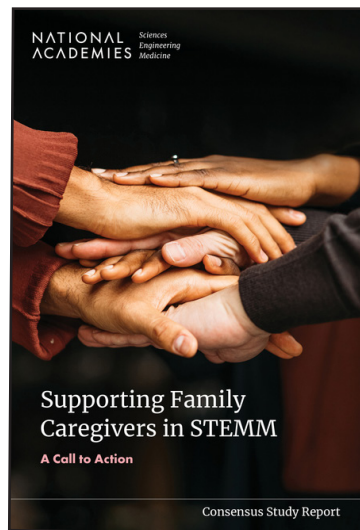
Foundational Research Gaps and Future Directions for Digital Twins

Across multiple domains of science, engineering, and medicine, excitement is growing about the potential of digital twins to transform scientific research, industrial practices, and many aspects of daily life. A digital twin couples computational models with a physical counterpart to create a system that is dynamically updated through bidirectional data flows as conditions change. Going beyond traditional simulation and modeling, digital twins could enable improved medical decision-making at the individual patient level, predictions of future weather and climate conditions over longer timescales, and safer, more efficient engineering processes. However, many challenges remain before these applications can be realized.

This book identifies the foundational research and resources needed to support the development of digital twin technologies. Foundational Research Gaps and Future Directions for Digital Twins presents critical future research priorities and an interdisciplinary research agenda for the field, including how federal agencies and researchers across domains can best collaborate.

Committee on Foundational Research Gaps and Future Directions for Digital Twins | National Academies of Sciences, Engineering, and Medicine

“Digital twins have great promise in bringing value across areas of science and technology, including engineering, the natural world, and medicine. Our report makes clear that there is a real opportunity here to bring together domains and disciplines in new, valuable ways, but to achieve that value requires investment in interdisciplinary foundations,” said Karen Willcox, director of the Oden Institute for Computational Engineering and Sciences and professor of aerospace engineering and engineering mechanics at the University of Texas at Austin, and chair of the committee that wrote the report. “There are serious research questions to tackle, and any responsible development of digital twin technologies must maintain an integral focus on establishing and maintaining trust.”



May 2024

6 x 9, 222 pages

Paperback: 978-0-309-71358-0

\$24.00

Ebook Available: \$19.99

Supporting Family Caregivers in STEMM

A Call to Action

Family caregiving is not simply an outside obligation that has no bearing on the workings of academic science, technology, engineering, mathematics, and medicine (STEMM) as it affects the lives of so many people working and studying in colleges and universities around the country. Caregiving responsibilities often clash with ingrained norms in academic STEMM environments, which demand that STEMM students and workers demonstrate immense devotion to their fields and are always available and visibly working.

Supporting Family Caregivers in STEMM describes the ways in which the labor and contributions of caregivers are often invisible and undervalued, with a specific focus on the academic STEMM ecosystem, including undergraduate and graduate students, postdoctoral scholars, resident physicians and other trainees, tenure-track and non-tenure-track faculty, staff, and researchers. This report reviews policies and practices that support caregivers, locally and nationally, and describes best practices in policy implementation and design. *Supporting Family Caregivers in STEMM* also highlights innovative practices and offers actionable recommendations to higher education institutions, public and private funders, and the federal government.

Committee on Policies and Practices for Supporting Caregivers Working in Science, Engineering, and Medicine
Elena Fuentes-Afflick and Katherine Wullert, Editors | National Academies of Sciences, Engineering, and Medicine

“Most of us have firsthand experience with caregiving, yet family caregiving can be a taboo topic in many sectors of academic STEMM. We hope our report brings attention to caregivers and stimulates discussion about ways we can better support caregiving at all levels.” - Elena Fuentes-Afflick, chair of the authoring committee



October 2024

6 x 9, 200 pages

Paperback: 978-0-309-70716-9

\$35.00

Ebook Available: \$24.99

Compounding Disasters in Gulf Coast Communities, 2020-2021

Impacts, Findings, and Lessons Learned

Experiencing a single disaster—a hurricane, tornado, flood, severe winter storm, or a global pandemic—can wreak havoc on the lives and livelihoods of individuals, families, communities and entire regions. For many people who live in communities in the U.S. Gulf of Mexico region, the reality of disaster is starker. Endemic socioeconomic and health disparities have made many living in Gulf of Mexico communities particularly vulnerable to the effects of weather-climate hazards. Prolonged disaster recovery and increasing disaster risk is an enduring reality for many living in Gulf of Mexico communities. Between 2020 and 2021, seven major hurricanes and a severe winter storm (Uri) affected communities across the region. As a backdrop to these acute weather events, the global COVID-19 pandemic was unfolding, producing a complex and unprecedented public health and socioeconomic crisis.

Traditionally, the impacts of disasters are quantified individually and often in economic terms of property damage and loss. In this case, each of these major events occurring in the Gulf of Mexico during this time period subsequently earned the moniker of “billion-dollar” disaster. However, this characterization does not reflect the non-financial human toll and disparate effects caused by multiple disruptive events that increase underlying physical and social vulnerabilities, reduce adaptive capacities and ultimately make communities more sensitive to the effects of future disruptive events. This book explores the interconnections, impacts, and lessons-learned of compounding disasters that impair resilience, response, and recovery efforts. While *Compounding Disasters in Gulf Coast Communities, 2020-2021* focuses on the Gulf of Mexico region, its findings apply to any region that has similar vulnerabilities and that is frequently at risk for disasters.

Compounding Disasters Consensus Study Committee | National Academies of Sciences, Engineering, and Medicine

Nutrient Requirements
of Poultry: 10th Revised
Edition

December 2024
8.5 x 11, 1,000 pages
Hardcover: 978-0-309-49052-8
\$149.95
Ebook Available: \$99.99

Nutrient Requirements of Poultry 10th Revised Edition

The *Nutrient Requirements of Poultry* series has been a benchmark publication for the research, judicial and regulatory communities since the first published edition in 1944. This resource has been a valuable reference for feed producers, the poultry scientific community, and poultry producers, both in the U.S. and internationally. The tenth revised edition of the *Nutrient Requirements of Poultry* builds on the previous edition published by in 1994..

Nutrient Requirements of Poultry: 10th Revised Edition contains new recommendations for the increased performance of different types of poultry, including broilers, turkeys, laying hens, and ducks, as well as other breeds. This book presents an in-depth analysis of recent research on the amounts of energy, amino acids, lipids, minerals, vitamins, lipids, and water needed by poultry; a summary of the composition of feed ingredients, mineral supplements, and feed additives routinely fed to poultry; information about variability in feed ingredients sourced from different regions; and information about feed ingredients from the biofuels industry and other new ingredients. The book also explores the effects of feeding on the nutritional quality of poultry meat and eggs; the effects of the environment, feed management, and other production aspects on nutrient requirements, including antibiotics and their alternatives; and new information on bioavailability of various nutrients.

A great deal of new research has been published since the publication of the ninth edition of this series. This new edition represents a comprehensive review of the most recent information available on poultry nutrition and ingredient composition that will allow efficient, profitable, and environmentally conscious poultry production.

Committee on the Nutrient Requirements of Poultry, 10th Revised Edition | National Academies of Sciences, Engineering, and Medicine

Exploring Linkages Between Soil Health and Human Health



October 2024

7 x10, 354 pages

Paperback: 978-0-309-71508-9

\$52.00

Ebook Available: \$41.99

Soil management practices that maximize yields have caused losses in soil organic matter, poor soil structure and water-holding capacity, and increased salinity on millions of acres of land. Microbial communities, the drivers of many soil processes, have been adversely affected by excessive use of tillage, nutrient applications, and pesticides. Furthermore, recent scientific advances have facilitated exploration of the microbiome and are spurring interest in how microbial communities are connected among species and how attention to microbiomes can support soil health, food quality, and human health. There is also the possibility that new discoveries in the soil microbiome could facilitate drug development and address threats to human health, including antibiotic resistance, contaminants, and soil-borne pathogens.

Exploring the Linkages Between Soil Health and Human Health provides guidance to improve soil health. The recommendations of this book will assist state and federal agencies, researchers, and funders of research as they promote the importance of soil health, support translational research, and develop a coordinated approach to monitor soil health over time and space and further our knowledge of the impacts of soil health on the human microbiome.

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